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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ZIMMERMAN, BRIAN A	
ART UNIT	**PAPER NUMBER**
2635	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/135,154	HAMILTON, T. ALLAN	
	Examiner	Art Unit	
	Brian A Zimmerman	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *50-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *50-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

EXAMINER'S RESPONSE

Status of Application

In response to the applicant's amendment received on 11/12/04. The examiner has considered the new presentation of claims and applicant arguments in view of the disclosure and the present state of the prior art. And it is the examiner's position that claims 50-57 remain unpatentable for the reasons set forth in this office action:

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 50-57 are rejected under 35 U.S.C. 103(a) as obvious over Kohler (U.S. 5,115,236) and the IRDA specification as discussed by the applicant on page 3 of the specification and the EP publication Selin (EP 0772307) and Kulha (5973611).

Kohler teaches a device (Fig. 2) for reducing power consumption in infrared-enabled appliances having power supply means and transceiver system means forming a circuit including switch means (Col. 1, lines 7-28 and Col. 2, lines 30-54), comprising: (wake-up) signal receiver (RC receiver in Fig. 2) and power actuator module (control voltage output 41 in Fig. 2), said module configured to recognize incident Ir discovery signals and responsively activate said switch means (Col. 3, lines 53-68 through Col. 5, lines 1-22). Kohler

teaches an infrared receiver (Fig. 2) and discovery signal detection circuitry configured to recognize the power level of the infrared "discovery signals" incident to said receiver and emit a power-up signal to said switch means (Fig. 2; Col. 4, lines 28-56). Kohler teaches that the power-up (message) signal can be instigated by user input (keyboard 8 in Fig. 3) via the transmitter portion of the transceiver system (Col. 5, lines 30-48). It is noted the Kohler device requires interpretation to determine if a wake up signal is being received. Therefore the received signal is interpreted in order to determine if a wake up signal has been received. The applicant admits that the IRDA standard discovery signal is used as a wake up signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used an IRDA discovery signal to control the wake up elements of the Kohler communication system.

In an analogous art, Selin shows a communication device that uses a sleep mode to reduce power consumption in the devices. Selin uses a specially coded signal or sequence to wake up a receiving communication unit. See col. 4 lines 45-55 and col. 9 lines 32+. Selin teaches that most of the activities of the device are switched off in order to conserve power. In the above system, the receiver (and a portion of the processor that recognizes the wake up signal) must remain on to enable waking up of the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have switched off the claimed elements as unessential elements while providing power to the receiver and associated wake up discovery processor as suggested by

Selin in the Kohler system because such would provide improved power conservation.

In an analogous art, Kulha shows a signal processor that is used to received a signal and generates a wake up or power up signal when the appropriate over the air signal is received. By providing a sleep mode the receiver advantageously saves power. By providing the processor with a portion that remains awake to receive wireless signals and wake up the rest of the processor the device can be provided in a single, simple circuit thus reducing space required on the circuit board. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the sleep mode detecting section of a processor as shown by Kulha to reduce power consumption and reduce the space taken up by the circuitry of the IR communication device discussed above.

2. Claims 50-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nykanen (5706110) and Kulha (5973611).

Nakanen shows a bi-directional IR communication device that includes bi-directional interface with the user, see figure 1 and description of IRDA. Nakanen inherently processes the IR signals received, and inherently includes a controller to control the operation of the transmitter, receiver and power supply. Nakanen shows a power management device, which in a standby mode provides operating power to only a portion of the circuit needed to receive and decode a wake up signal, while switching off the additional circuits. See col. 4 lines 1-15.

Nakanen does not expressly show a battery as the power supply, but one of ordinary skill in the art at the time of the invention would have found it obvious to use a battery as the power supply in the Nakanen device in order to make the device portable or mobile.

In an analogous art, Kulha shows a signal processor that is used to receive a signal and generates a wake up or power up signal when the appropriate over the air signal is received. By providing a sleep mode the receiver advantageously saves power. By providing the processor with a portion that remains awake to receive wireless signals and wake up the rest of the processor the device can be provided in a single, simple circuit thus reducing space required on the circuit board. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the sleep mode detecting section of a processor as shown by Kulha to reduce power consumption and reduce the space taken up by the circuitry of the IR communication device discussed above.

Response to Arguments

Applicant's arguments filed 5/26/04 have been fully considered but they are not persuasive.

The applicant argues that there is no recognition in any cited reference that there is anything wrong with IrDA transceivers or any need to modify an IrDA transceiver. However, there is no requirement that an "express, written motivation to combine must appear in prior art references before a finding

of obviousness." See *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1276, 69 USPQ2d 1686, 1690 (Fed. Cir. 2004). For example, motivation to combine prior art references may exist in the nature of the problem to be solved (*Ruiz* at 1276, 69 USPQ2d at 1690) or the knowledge of one of ordinary skill in the art (*National Steel Car v. Canadian Pacific Railway Ltd.*, 357 F.3d 1319, 1338, 69 USPQ2d 1641, 1656 (Fed. Cir. 2004)). See MPEP § 2143.01 for a discussion of proper motivation to combine references. Here, the examiner puts forth that there is an extremely well known problem with all electronics that is power consumption. The reduction of power consumption in electronics has been an issue for some time. And it is well known in the field that IrDA devices consume power and are therefore concerned with power consumption. The examiner then, correctly concludes that using the various teachings would have been obvious for providing the (well known desired) function of reducing power consumption. It is noted that the claims are not specifically directed to a specific problem.

The applicant argues that the references do not specifically recognize the problem solved by the applicant. First it is noted that the problem solved bears no weight on the patentability of the claimed invention. Additionally, it is pointed out that Nykanen specifically discusses the use of a power saving mode in an IrDA system see col. 4 lines 1-15.

The applicant argues that the examiner is impermissibly picking and choosing elements from the prior art. It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within

the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The applicant continually argues that the references do not show elements for which they were not cited. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The applicant argues that the idea to save power in an IrDA device is only gleaned from the applicant's disclosure. As pointed out above, there is a long-standing desire to reduce power consumption in electronic devices. Electricity is paid for by the amount of electricity used, no one wants to waste electricity or money. There is no logical argument set forth by the applicant to support any conclusion otherwise. Additionally, the portion of the specification that enlightens one to the concept of power saving is the discussion of the admitted prior art with respect to the IrDA protocol that uses a wake up signal procedure. Wake-up is a term in the communication art that implies a power conservation mode change.

The applicant argues that the examiner has chosen not to use certain aspects of the references. While it may be true that the rejection does not discuss the various teachings of the references that are not pertinent to the claimed invention the applicant cannot be further from the truth. The applicant's "analysis's" the rejection by stating that reference A does not teach...(what reference B is cited for teaching). By this line of reasoning there could never an

obviousness rejection because the applicant wants each reference to show **all the claimed limitations** before they could be combined. This is simply not the requirement under 35 USC 103. The references were carefully chosen for what they taught to one of ordinary skill in the art as is proper under an obviousness rejection.

The applicant argues that there is no suggestion in Kohler that anything other than a special power level can be used to identify a wake up pulse. It is noted that claim 50 does not require that the wake up signal be IrDA compliant. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Here it has been shown that Kohler teaches the use of a special signal to wake up a device and place the device in a wake up (high power) mode. When combined with the applicant's discussion of the IrDA specification, it clearly would have been obvious to one of ordinary skill, to use a special signal to wake up an IrDA device, since the applicant discusses a discovery signal being used to wake up the IrDA device.

The applicant argues that since Selin teaches a timed (periodically) wake up process that would be contrary to the listening for a wake up signal as claimed. The applicant has not pointed to specific locations in Selin to support their interpretation of the reference. Selin's sleep mode deals with turning off

certain circuits to save power as pointed by the examiner (col. 4 lines 45-55 and col. 9 lines 32+) Selin has two sleep modes, one where nothing is on and a second where the receiver turns on and listens for a specially coded signal to wake up the rest of the device. If only the first mode were used the applicant's argument might be correct, however **the applicant selectively ignores** the fact that Selin does have a reduced power mode that is changed to a full power mode in response to a specially coded signal. The first mode discussed by Selin, where nothing is on and the receiver is periodically turned on is not an alternative to the other mode rather it works in conjunction with second mode to provide even better power saving features.

The applicant argues that Nykanen does not disclose an IrDA transceiver having two different power consumption modes. Again the applicant is arguing the references individually to the exclusion of addressing the combination rejection. Note that claim 50 does not require an IrDA compliant device. As pointed out previously, Nykanen does show two power consumption modes in an IrDA device. The abstract of Nykanen sets forth the operation of the device.

> A method is provided wherein idle periods occurring in the data transmission between various services are detected by means of a **Power Manager**, whereby the **infrared link (IrDA-SIR)** is shut down automatically. The link restarts automatically when new activity is detected. Thanks to the method, **at least one of the stations can also go into the sleep mode**, even though a virtual link to the application layer (7) of the other station is maintained in the application layer (7).

The paragraph bridging columns 3 and 4 states:

> In the following the invention is described in greater detail by means of examples and with reference to the accompanying drawings, in which FIG. 2 shows a station which **supports the IrDA data** communications

> architecture and in which the power saving method according to the invention is used. The object of the invention is to control a **connection between stations** (transmitting and receiving) in such a way that when there is an idle period in the services of the application layer, the link on the transmission medium is powered down. **After powering down**, the stations or at least the parts of the station connected with the physical transmission medium can go over to **a low-power sleep mode**, which is available to them. The stations are woken up by means of an indication of activity of the physical layer or by an excitation coming from a service that has established a connection of the application layer.

Therefore, it can be clearly seen that the transceivers in Nykanen include a low power sleep mode and inherently include a higher power non-sleep mode-hence two different power consumption modes. Nykanen does shows a system that supports IrDA communication, it is a transceiver and it includes two power consumption modes.

Regarding the 132 Declaration, the examiner maintains that the declaration provides no factual evidence of nexus. The applicant points to a customer discussion as a rebuttal. First it is noted that one customer is not a very large percentage of the million dollars accounted for in the Declaration. Additionally, it is pointed out that the customer desired one more expensive Zilog product over another Zilog product. There is no evidence that the only difference between these products is the battery saving feature discussed. There is plainly no evidence that shows a nexus between the claimed invention and the sales figures that would point to the conclusion the applicant submits.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian A Zimmerman whose telephone number is 571-272-3059. The examiner can normally be reached on Off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian A Zimmerman
Primary Examiner
Art Unit 2635

BAZ